



Infinity Light

Written By: Gerhard de la Mora

TOOLS:

- [Hot glue gun \(1\)](#)
- [Soldering iron \(1\)](#)

PARTS:

- [DC motor \(1\)](#)
- [Diode \(1\)](#)
- [Capacitor\(s\) \(1\)](#)
- [LED \(1\)](#)

SUMMARY

Convert your DC motor into a dynamo and use it to generate light without batteries. All you need is some capacitors, a DC motor, diode, wire, gear system and LED. To make it light all you need to do is spin your dynamo.

Step 1 — Infinity Light



- The main thing you need is the gear system with one wheel and the DC motor. You need to put a gear on the motor shaft and attach it to the gear system as in the image.

Step 2



- Now we are going to build the "battery system" using capacitors. By connecting the capacitors in parallel (not series), we can hold more charge by using any combination of capacitance and quantity of capacitors. Generally, for the electrolytic capacitors used here, size matters. The bigger the capacitor the more charge it can hold. The capacity of every capacitor along with its unit of measure is marked on its case. Most common electrolytic capacitors are measured in microfarads (F or MFD).
- To make the "battery," solder all the negative pins of the capacitors together. Solder this to a length of wire.
- Solder all the positive leads of the capacitors together then solder this to a length of wire.

Step 3



- Now, we are going to connect the gear system and dynamo to the storage system.
- Solder one diode lead to the negative terminal of the DC motor.
- Solder the negative lead of the LED to the free diode lead from the dynamo. Don't forget to add the appropriate resistor for the LED.

Step 4



- We are finished. Now you can decorate it the way we want and use it when you want. All you need to do is spin the wheel.

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